Furniture or Structural Fitting

The invention pertains to a furniture or structural fitting for connecting two furniture components or structural components. As a result of the connection of the two parts by means of the furniture or structural fitting, their orientation is, at the same time, established in the vertical direction. In many cases, it is necessary to undertake a vertical orientation, especially an adjustment in terms of elevation, of one structural component relative to the other structural component, even after applying a connective fitting. Examples of this include the adjustment of a door's elevation relative to the doorframe or casement, or the orientation of a front plate on a drawer or on the body of a piece of furniture.

It is the task of the invention, therefore, to create a furniture or structural fitting which renders simple relative repositioning possible, particularly adjustment in terms of elevation, in conjunction with simple construction and low spatial requirements, between those furniture or structural components that are connected by the fitting.

This task is resolved in keeping with the invention by means of a furniture or structural fitting consisting of a first fitting part and a second fitting part connected to the former by way of an elevation adjustment apparatus, such that on the first fitting part, a threaded spindle is seated on two bearings arranged at some distance from one another so as to be capable of rotation, but incapable of an axial position adjustment, such that a threaded sleeve that is connected to the second fitting part is engaged with the

threaded spindle between both bearings so that its position can be adjusted axially, and the second fitting part, which exhibits the threaded sleeve, is guided by means of a longitudinal guiding apparatus on the first fitting part so as to be incapable of rotating.

By rotating the threaded spindle, both fitting parts undergo a positional readjustment relative to one another in the axial direction so that a relative adjustment of the elevation of two furniture components or structural components, which are connected to both fitting parts, is rendered possible.

The spatial requirements of the elevation adjustment apparatus obtained in this way are relatively slight because both the two bearings of the threaded spindle as well as the threaded sleeve can be embodied so as to be relatively thin. The elevation adjustment apparatus according to the invention can thus be provided even on flat fitting parts, preferably without exceeding their thickness appreciably.

Due to the fact that the second fitting part, which exhibits the threaded sleeve, is guided by means of a longitudinal guiding apparatus on the first fitting part in such a way as to be incapable of rotating, the orientation of both structural components to be connected relative to one another is retained – if this is desired – while the elevation is adjusted.

A particularly advantageous developmental extension of the thought behind the invention is characterized in that in the process, the second fitting part is connected, so as to be capable of rotating, to an attachment plate by means of a hinge having a hinge

axis that runs parallel to the axis of the threaded spindle. In this manner, a hinge is obtained that can be used, for example, as the hinge of a door, which also renders an adjustment of the elevation of both parts connected by the hinge, relative to each other, possible, for example, the adjustment, in terms of elevation, of a door hung on a doorframe or casement by means of such hinges.

The threaded spindle is preferably supported axially at both ends in opposite directions at the allocated bearing in each case. By these means, the axial forces and flexion forces on the second fitting part are introduced, by way of the threaded sleeve, to the first fitting part in an advantageous manner, without imposing a great load, especially flexion stress, on the threaded spindle by so doing. The threaded spindle can therefore be embodied so as to be relatively slender.

In order to execute the axial support of the threaded spindle at both bearings in a simple manner from the standpoint of construction and production technology, and in order to take up just little space for the purpose, provision is made in extension of the thought behind the invention so that the threaded spindle exhibits a thickened head at both ends outside the individual bearing. For turning the threaded spindle, provision is made, preferably, so that one of the two heads of the threaded spindle exhibits the profile of a wrench projection, for example, an internal hexagonal profile, a cross slit, or a transverse slit. What is achieved with this is that the adjustment can be accomplished with a simple tool that is widely available, namely a screwdriver. Other advantageous

embodiments of the thought behind the invention are the subject matter of additional subsidiary claims.

Following are embodiment examples of the invention, which are represented in the drawing, elucidated in greater detail.

Fig. 1 shows a furniture or structural fitting, which is embodied as a door hinge whose elevation can be adjusted, from the front, and

Fig. 2 shows the fitting according to Fig. 1, from the back.

The furniture or structural fitting that is depicted exhibits a first fitting part 1 and a second fitting part 2. Both fitting parts 1 and 2 are connected with one another by way of an elevation adjustment apparatus 4 so as to be longitudinally adjustable. On the first fitting part 1, a threaded spindle 5 is seated in two bearings 6 and 7, which are embodied on the first fitting part 1 as coaxial sleeves and are arranged at some distance from one another so as to be capable of rotation, but incapable of axial repositioning.

A threaded sleeve 8, which is connected to the second fitting part 2 as one piece, is arranged in alignment between both bearings 6, 7 and it exhibits internal threading, by means of which it is engaged with the threading of the threaded spindle 5.

The threaded spindle 5 is equipped at both its ends, outside the individual bearing 6 or 7, respectively, with a thickened head 9 or 10, respectively. The threaded spindle 5 is supported in the axial direction at the bearings 6, 7 by means of both heads 9, 10.

One head 10 exhibits a transverse slit 11 as a wrench projection profile in the embodiment example that is shown, which renders it possible to turn the threaded spindle 5 by means of a screwdriver. By these means, a relative adjustment of both fitting parts 1, 2 occurs in the axial direction of threaded spindle 5, and thus, a relative adjustment of the elevation of the two furniture parts or structural components connected therewith.

The embodiment example of a furniture or structural fitting that is shown represents a hinge, for example, the hinge of a door.

The two fitting parts 1, 2 are guided so as to be incapable of rotating, one relative to the other. For this purpose, a longitudinal guiding apparatus is provided, which, in the case of the embodiment example that is depicted, exhibits a guide plate 12 that is rigidly connected to the second fitting part 2, which is accommodated in a flat pocket 13 formed by the first fitting part 1, so that its longitudinal position can be adjusted.

As one recognizes from the back view in Fig. 2, the pocket 13 is formed between a central section 14 of the first fitting part 1 and a wall surface (not depicted in the drawing), to which the first fitting part 1 is attached. To this end, both terminal sections

15, 16 of the first fitting part 1 are offset to such a degree, relative to the central section 14, that the flat pocket 13, in which the guide plate 12 can be slid, is formed under the central section 14 and the wall surface.

The second fitting part 2 is connected with attachment plate 19, which exhibits boreholes for screws 20 by means of a hinge 17 with hinge axis 18, which runs parallel to the axis of the threaded spindle 5, so as to be capable of rotation.

The first fitting part 1 is also equipped with boreholes for screws 21. The fitting that is depicted can be used as a door hinge whose height can be adjusted in such a manner that the first fitting part 1 is attached to a doorframe or door casement by means of its screw boreholes 21, whereas the attachment plate 19 is screwed onto a door leaf by way of its boreholes 20. By rotating the threaded spindle 5 by means of the head 10, the door's elevation can then be adjusted.

However, it is also possible by means of this fitting to connect to one another two furniture components or structural components that are arranged at an angle to one another such that their elevation can be adjusted, without employing the capacity of hinge 17 to rotate in the process. For example, the front plate of a piece of furniture can be connected by means of two fittings of the embodiment [type] depicted to a furniture drawer so that its elevation may be adjusted.